COOPERATION SOUTH

Venezuela's Carora Cattle: A Triumph of Cross-breeding **1990 No. 3**

Cover:

Carora cattle, a high milk-yielding breed developed in north-western Venezuela. See "Latin America Draws Closer Together," page 19.

Photo credits:
Cover: Venezuelan Association of Carora Cattle Breeders; *Pages 8-14:* Cherie Hart/UNDP; *Page 16:* International Center for Public Enterprises; *Pages 17-18:* Sid Kane/UNDP; *Page 19:* Venezuelan Association of Carora Cattle Breeders; *Page 20:* SELA; *Page 21:* Christopher McIntosh/UNDP; *Page 22:* Andrew Boner/UNDP

Illustrations:
Page 4: Jean-François Allaux; *Pages 7 and 15:* Eric Michel

In This Issue

December 1990

A Fresh Look at the Foundations of TCDC 4

The Information Dimension 6

Indonesia Reaches Out to the Developing World 8

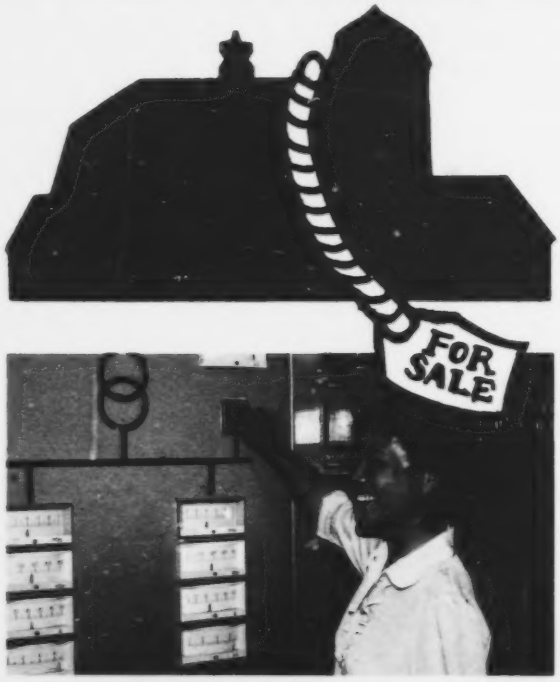
From Volcanology to Rice Production 11

TCDC and the Private Sector: An East European View 15

Turning Rivers Into Energy 17

Latin America Draws Closer Together 19

Pakistan: National Training for TCDC 22



Top: **Privatization is affecting patterns of TCDC.**

Centre: **A technician at a small hydropower plant near Hangzhou in eastern China.**

Bottom: **Rice terraces in western Java, Indonesia.**

READEX FICHE

A Fresh Look at the Foundations of TCDC

This article by Christopher McIntosh addresses some basic questions about the organizational machinery required for successful Technical Co-operation among Developing Countries

United Nations, New York –The symbol of TCDC is two spheres with their southern halves linked by a bridge. Over the years, the pages of this magazine have contained many examples of technical co-operation which have flowed across that bridge: Nicaraguans using artificial limbs made in India; Yemeni mechanics training in Jordan; China and Argentina exchanging food technology. Each of these instances makes an eloquent case for TCDC, but none of them would have occurred without the bridge itself — that is, without institutions to support and promote co-operation. It may be useful, therefore, at this stage in the history of TCDC, to reflect on what institutional arrangements have evolved to foster co-operation, how they differ between countries and what problems have been encountered in making them work.

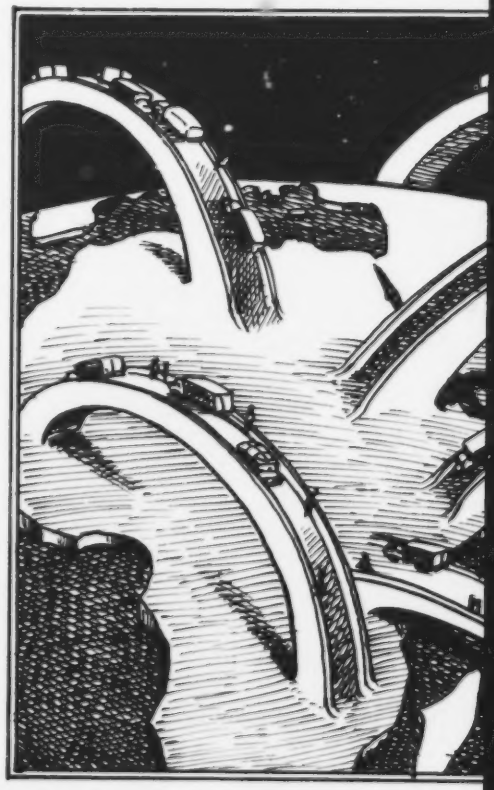
In most countries the cornerstone of TCDC is the focal point; a unit or individual officially charged with co-ordinating TCDC activities and liaising with international bodies and focal points in other countries. A text book arrangement for focal points would be roughly as follows. A TCDC unit is established with a generous government budget within an inter-sectoral authority such as the Ministry of Planning or the Prime Minister's office. This unit covers both incoming and outgoing assistance. Linked to it are sectoral and regional focal points, which continually consult with the central focal point on the country's technical needs and capacities.

In reality, countries are found to vary widely when it comes to such questions as: In which ministry is the focal point located? Is it covered by special legislation? Does the same focal point cover both needs and capacities? Is there a separate focal point for conventional north-south technical assistance?

The choice of arrangements depends on a variety of factors, one of them being where a country stands on the development scale. All developing countries have both capacities to share and needs that can effectively be met under TCDC arrangements. However, owing to lack of information on the kinds of expertise, training facilities and equipment available from other developing countries, there has been a tendency for nations at an intermediate stage in development to be suppliers rather than recipients of assistance under the heading of TCDC.

Tunisia, for example, while being highly active as a supplier of TCDC, usually looks to the north for its own technical assistance, partly because of its long association with France. In Tunisia's case, therefore, the TCDC focal point, the Agence Tunisienne de Co-opération Technique, concerns itself solely with supply of expertise. Incoming assistance, whether from developed or developing countries, is dealt with through other channels.

In Brazil, another country at an intermediate stage of development, outgoing TCDC is handled by the Brazilian Co-operation Agency, linked to the Ministry for Foreign Relations but with its own executive directorate and technical advisory board drawn from different sectors. While Brazil has an excellent record as a supplier of technology and expertise to other developing countries, it has so far not exploited the TCDC option to any great extent for meeting its own needs. Christina Montenegro, TCDC officer at the office of the United Nations Development Programme (UNDP) in Brasilia,



explains that there have been very few cases where Brazil was able to locate an appropriate source of technical assistance within the developing world to answer a specific need, using TCDC methods.

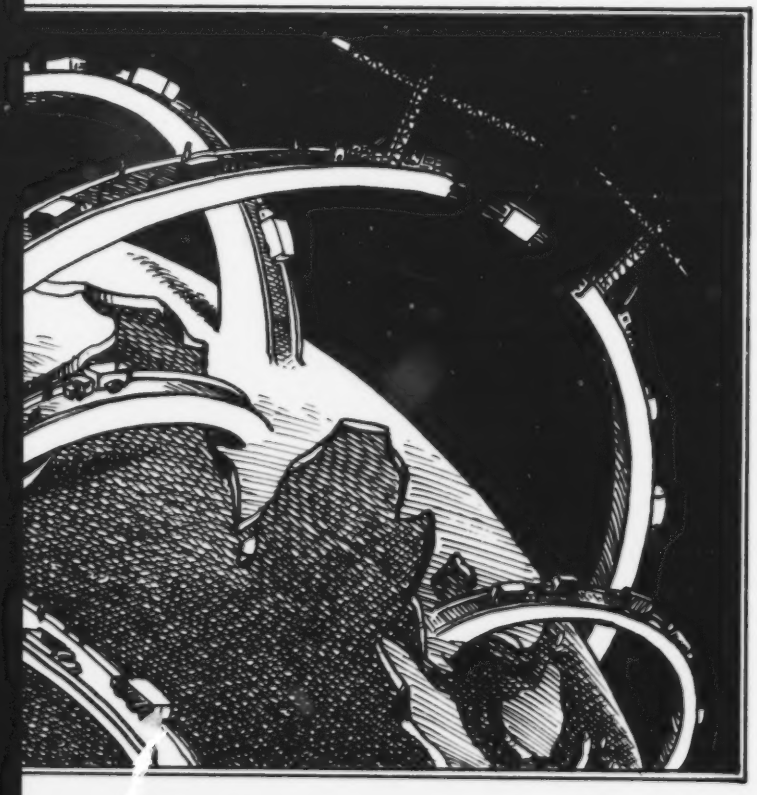
Once again, the problem is lack of information. Therefore, one of the first priorities for a focal point is to have the means of collecting and disseminating information on capacities and needs. A country's capacities, however, tend to remain stable over long periods. This means that a roster of capacities can be brought up to date at fairly generous intervals — say every six months or every year. Needs, on the other hand, change from day to day.

Ideally, when a need arises that cannot be met from within the country, the first move should be to consider whether it can be answered through TCDC arrangements. This requires that in every sector there is widespread awareness of the TCDC option and the official channels through which it can be explored. Actively spreading and maintaining this awareness is one of the most important tasks of a TCDC focal point.

Equally important is that there should be a high-level commitment to promoting the use of TCDC methods. In this regard, it is significant that the countries most active in TCDC include many of those that have opted to place their focal points under inter-ministerial or inter-sectoral authorities. The Tunisian ATCT, for example, is under the Prime Minister's Office. Indonesia and Turkey, both active in TCDC, have focal points under the Cabinet Secretariat. In Argentina, another country with a strong TCDC programme, all technical co-operation activities are co-ordinated by the Planning Secretariat of the Presidency through the General Directorate of International Technical Co-operation.

On the other hand, many countries with highly successful TCDC programmes find it more practical to locate their focal points elsewhere. The list of focal points compiled by the Special Unit for TCDC of UNDP reveals that 28 per cent of countries have their focal points located in the foreign ministry, while 44 per cent are in the ministry responsible for finance, planning or economic development. A small proportion, 10 per cent, have their focal points under an inter-ministerial authority, usually the prime minister's office. The remaining 18 per cent are under other miscellaneous ministries.

No institutional model can be held up as universally applicable. At the same time, it is clear that organizational arrangements are crucial in determining whether or not countries are able successfully to exploit the possibilities offered by the TCDC concept and thus to build a stronger South. ■



The Information Dimension

Edward C. White examines the importance of information technology for makingTechnical Co-operation among Developing Countries a reality

United Nations, New York — The world today is an "information intensive" place, in which the computer data base is becoming an increasingly indispensable tool. The United Nations system alone now maintains more than 300 data bases, and the number throughout the world runs into many thousands.

Information today is a resource no less crucial to development and progress than natural and human resources. Countries lacking data bases are at an enormous disadvantage in virtually every sector. Information on trade opportunities, for example, can help a country find out who needs its products, where the opportunities are, how others have confronted problems of production or marketing similar to their own, and at what prices others are selling similar goods.

Unfortunately, not all countries have equal access to information. The flow of world information is concentrated among the countries of the north. Even when data is collected in the south, it tends to be channelled to the north to satisfy northern needs. Information needed by countries in the south for their own economic and development programmes (whether the source of the data is north or south) is often unavailable to them because of the high costs, poor telecommunications infrastructure or lack of access to the necessary computer technology.

The development efforts of these countries, however, cannot be fully effective without the benefits of information technology. This also applies to technical co-operation between the countries of the developing world.

As attractive as such South-South co-operation appears, it still does not occur on the scale that its advantages would suggest. One of the key impediments is lack of information about what is available in other developing countries around the world. This lack is due partly to difficulties in collecting data in many developing countries. More importantly, it is due to the poorly developed information links between these countries.

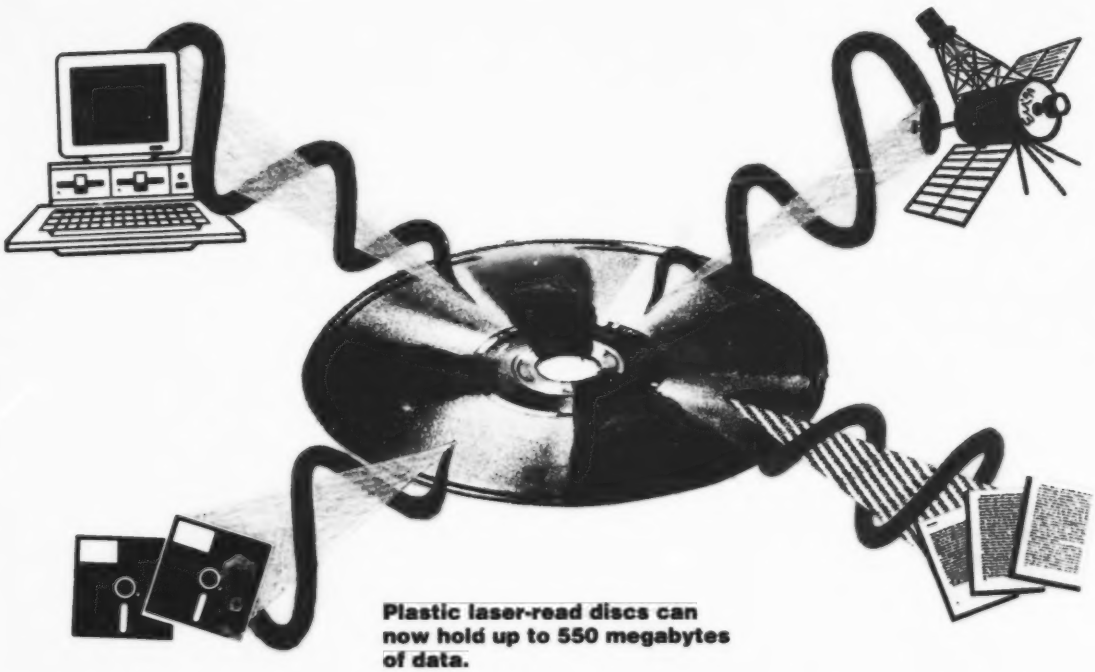
At the same time, there are sources of computerized data that are designed to assist developing countries in finding information relevant to their development activities. These sources are increasing in number. Among them are INRES-South, UNDP's Information Referral Service on training and expertise available from developing countries, and UNIDO's Industrial Technology Information Bulletin. UNIDO provides information on industrial technology for small and medium enterprises. Another fledgling network is the Technological Information Pilot Service (TIPS), supported under a UNDP project subcontracted to the Development Network, an NGO based in Rome, which operates a subscription service offering rapid access to trade and technical data from and in ten developing countries.

Among the developing countries themselves there is a keen awareness of the key role which information can play in their development. One of the most important recent initiatives was a decision by the Chambers of Commerce of the Group of 77 to create a South-South Trade Information Network. The draft action plan calls for the establishment of three regional trade information centres. These will establish computerized registries of importers, exporters and manufacturers throughout the developing world, making use of common software (based on the INRES-South model) for data storage and retrieval. The system will later be expanded to include timely dissemination of data on trade opportunities. It will also bring together information on policies, legislation, and the commercial environment in member states of the Group of 77.

This system, which is being carried out with assistance from the International Trade Center and the Special Unit for TCDC, will have the virtue of being dedicated exclusively to the interests of the developing countries. It will also be manageable and sustainable by the developing countries themselves.

INRES-South has for some time had the goal of decentralizing its activities, so that the system is more directly accessible to end users in developing countries. To this end the system, including both software and suitable hardware, has already been supplied to several countries, where it is housed either in a government office or the office of the local UNDP Resident Representative.

While the cost of sophisticated microcomputers continues to decline steadily, one of the persistent constraints to the better utilization of information in developing countries is the high cost of installing and running adequate telecommunications. This applies to both north-south and south-south communications. Thus, for some time to come, the use of "on-line" data bases for data acquisition will remain beyond the reach of all but the most successful business enterprises or the best-endowed govern-



Plastic laser-read discs can now hold up to 550 megabytes of data.

ment departments and research centres in the developing world.

Fortunately, there is a recent development in computer technology that can help: the CD-ROM (for "compact disc, read-only memory") storage disc. These thin, flexible plastic laser-read discs weighing only a few ounces can each hold up to 550 megabytes (550,000,000 bytes) of data, compared with 20 to 40 megabytes for a typical hard disc and 1.4 megabytes for a high density diskette. Thanks to the CD-ROM, it is now possible to mail to any part of the world, in an ordinary envelope, a data base of a size and level of sophistication that was only available on mainframe computers until very recently.

Nor does the end user require a super micro-computer to use these data bases. A fairly inexpensive and compact CD-ROM attachment can easily be fitted to an ordinary microcomputer. With suitable software to access the data, literally a world of information becomes available.

While the CD-ROM is a highly valuable information tool, it is to be hoped that on-line data bases will ultimately become more widely accessible to the developing world. One of the ways in which this could happen is through wider use of satellite communications. At present this is an expensive option, but cheaper ways of sending and receiving information by satellite are already being developed. Potentially, satellites offer developing countries a cost-effective and flexible alternative to telecommunications for gaining access to on-line data bases.

A global on-line system would make possible an almost instantaneous matching of capacities and needs. Thus, for example, a farming community in Nigeria that needed assistance in installing an irrigation system could enter a request in an international data base and immediately receive information about what capacities were available anywhere in the developing world.

We have some way to go before this goal can be attained, but an important step towards it is the recognition that information technology will increasingly be a key part of the successful implementation of TCDC. ■

Indonesia Reaches Out to the Developing World

Cherie Hart reports on the recent multisectoral programming exercise held in Jakarta, Indonesia, which was attended by representatives from 29 countries of the developing world

Technicians design models of irrigation canals at the Hydraulic Engineering Laboratory in Bekasi.

Jakarta, Indonesia — At first glance it appeared their name cards were mixed up. A herbal medicine expert, a textile exporter and a mining engineer might seem an unlikely trio to attend the same global meeting. Yet such diversity was characteristic of the TCDC programming exercise held here from 30 July to 3 August, the first ever held in South-East Asia.

Twenty-nine countries — five from Africa, seven from the Arab States and Europe, twelve from Asia and the Pacific and five from Latin America — sent representatives. The meeting took place at the Horison Hotel, located by the coral reefs and sandy beaches of Jakarta's north shore. The event, which was the final stage of a year-long process, was organized by the Government of Indonesia in collaboration with the Special Unit for TCDC of the United Nations Development Programme (UNDP). As with previous programming exercises elsewhere, the aim was to enable participating countries to negotiate bilateral technical co-operation projects in a variety of fields.

The participants included representatives of governments, non-governmental organizations, public and private enterprises, and research institutes. They discussed details of technical co-operation projects spanning a wide variety of fields, including agriculture, public works, family planning, mining, energy, forestry and small industry development.

The meeting was initiated by a one-day seminar entitled "People's Participation and National Self-Reliance: Issues and Policy Options for TCDC in the 1990s." This gave non-governmental organizations (NGOs) a chance to exchange views and experiences concerning grass-roots development. A number of successful NGO case studies were presented to the group on such subjects as credit to the poor in Bangladesh, urbanization in Indonesia and rural development in the Philippines.

In the year leading up to the exercise, the Government of Indo-

nesia and UNDP worked closely to prepare for the meeting. Initially, the Co-ordinating Committee for International Technical Co-operation (CCITC) of Indonesia contacted the country's public and private agencies and institutions which carry out TCDC programmes. From information provided by these TCDC users, a compendium of Indonesia's needs and capacities was prepared. With the assistance of UNDP, the compendium was sent to all of the invited countries to help them identify opportunities to collaborate with Indonesia using TCDC methods.

Those countries interested in participating in the programming exercise then formulated specific TCDC project proposals, in some cases offering capacities and in other instances requesting expertise to fill needs. When necessary, advisors from Indonesia were sent to the invited countries to help them draft the documents. Following these consultations, officials from CCITC and UNDP reviewed and identified the projects which were to form the basis of the TCDC programming exercise. In making their selection, the officials took into account such factors as whether sufficient funding could be mobilized and whether the recipient country had the capacity to absorb a technology.

As the Director of the Special Unit for TCDC, Surinder M.S. Chadha, explained: "Those of us in the Special Unit are brokers and match-makers. We help match the needs of one country with the capacities of another. But in the final analysis, it is up to the countries themselves to agree on the terms and conditions of technical co-operation."

A total of 219 projects of technical co-operation were discussed during negotiations. As with most programming exercises, the host country was the supplier in the majority of cases.

"Indonesia has a wide range of organized training institutions from which we can benefit," said Gambia's delegate Sola Mahoney, Principal Secretary in the Office of the President of Gambia. "At this meeting, we signed an important project agreement for the rehabilitation of the physically handicapped. It represents a major step toward bringing many of our disabled — particularly the large number of polio victims in Gambia — back into the working world."

Gambia recently opened a rehabilitation centre for the handicapped, but it lacks trained personnel to run it. Under the new TCDC agreement, two Gambians will receive technical training at Indonesia's Rehabilitation Centre in Central Java. Their two-month course will examine the medical and social aspects of providing rehabilitation services. Room and board will be paid for by Indonesia. Air travel will be arranged by Indonesia and paid for using Indicative Planning Figure (IPF) funds under a UNDP umbrella project for the promotion of TCDC.

"This programming exercise showed us that Guatemala and Indonesia have much to share in the field of herbal medicine," said Guatemala's representative Armando Caceres, who is Director of the National Commission of Medicinal Plants in Guatemala. "Both have a diversity of medicinal plants and both are at risk of losing them if environmental steps are not taken soon." The new TCDC agreement calls for each country to send an agronomist, a pharmacist and a physician to the other country to examine ways of upgrading the production and use of medicinal plants.

Nepal and Indonesia signed ten agreements ranging from seismic design of human settlements, soil erosion engineering and irrigation methods, to livestock development, improvement of textile industries and expansion of foundries. "It is much more cost-effective for us to tap Indonesia's technical expertise in these areas, than it is for us to go to an industrialized country for training," ex-

Adik Bantarso, chairman of the organizing committee for the programming exercise and head of the TCDC Programme Division of Indonesia's Bureau for Technical Co-operation.

Gambia's delegate, Sola Mahoney *(right)*, and an Indonesian poultry expert examine a chicken feather for parasites.

plained Bhola Chalise, Joint Secretary of the Ministry of Industry in Nepal.

"Indonesia is a leading Islamic country that has made tremendous progress in the area of family planning," said Safwat Ayoub, Deputy Director of Development Co-operation in Egypt's Ministry of Foreign Affairs. "Theirs is a success story from which we can learn a great deal." Under a TCDC agreement, Egypt will be sending a trainee to Indonesia's Education and Training Centre for the National Family Planning Co-ordinating Board to learn how to formulate and supervise family planning programmes.

Not all contacts were made across negotiating tables. Some discussions took place during excursions to Indonesian training centres, where delegates could get a first-hand glimpse of some of the areas of expertise which Indonesia has to offer. The places visited included the International Training Centre for Poultry Husbandry and Feed Manufacturing, the Construction Guidance Service Centre, the Public Works Data Centre, the Institute for Human Settlements and the Institute for Road Engineering.

Towards the end of the event, delegates were taken to the Bandung Conference Centre, the site of the first Afro-Asian Solidarity Conference held in Indonesia in 1955. At that historic gathering, representatives from 29 Asian and African countries addressed the need for technical co-operation among and within developing countries. They discussed ways by which their people could achieve fuller economic, cultural and political co-operation. Thirty-five years later, 29 countries once again sent delegates to Indonesia to seek ways of fostering mutual co-operation or, as the Indonesians say, *gotong-royong*. ■

From Volcanology to Rice Production

Cherie Hart here examines Indonesia's own special contributions to strengthening Technical Co-operation among Developing Countries

Rice terraces in western Java. Indonesia's expertise in rice production is being passed on to other developing countries.

Jakarta, Indonesia — Considering Indonesia's long history of quakes and volcanic eruptions, it is no earth-shaking surprise that seismologists, volcanologists, geologists and structural engineers come here from many parts of the world to study. The country's 13,677 islands endure 400 earthquakes annually, and its 125 active volcanoes create frequent destructive geological shifts. Indonesia's famous Krakatau volcano exploded so violently in 1883 that it could be heard 4,000 kilometres away.

The country's long experience in reducing earthquake destruction is now being passed on to other developing countries. Each year, its Institute of Human Settlements in Bandung, west Java offers an eight-week seismology and earthquake engineering seminar to students who come from many parts of Asia, and occasionally from Africa. Countries that have benefited from the courses include Fiji, Thailand, the Philippines, Nigeria, India and China.

Trainees test a variety of structural designs. Experimental buildings are placed on massive tilting tables which toss and turn to simulate earthquake action. If the buildings survive the test, there is a good chance the design will survive a real earthquake. Apart from the design of earthquake-resistant structures, the intensive course also includes soil dynamics, urban

disaster prevention and reinforcement of buildings.

Earthquake engineering is just one of the many areas in which Indonesia is sharing its expertise with other developing countries to build collective self-reliance. Other fields covered by its TCDC programme include agriculture, forestry, oil and gas technology, industrial development and family planning. The activities are conducted through a variety of governmental and private institutions and agencies.

Over the past decade, more than 2,150 people from 65 developing countries have benefited from the expertise provided through the programme. Indonesia also uses TCDC to meet its own needs, and since 1986 it has sent more than 285 nationals on TCDC missions in other developing countries. Its co-operation has been mainly with Asian and Pacific countries, but has also included Africa, Latin America, the Arab States and Europe.

Indonesia's drive to strengthen south-south co-operation is rooted in a 1967 presidential decree which created the Co-ordinating Committee for International Technical Co-operation (CCITC) of the Government of Indonesia. Its mandate is to formulate national policy on technical co-operation.

Indonesia's commitment to TCDC is also written into the country's Guidelines of State Policy. This document calls for Indonesia to "strengthen solidarity, unity and economic as well as technical co-operation among developing countries in order to contribute to the establishment of a more just and equitable international economic order."

Within CCITC is the Bureau for International Technical Co-operation, which is responsible for clearing all foreign experts and trainees coming to Indonesia, and all officials travelling abroad on TCDC exercises. It also co-ordinates Indonesian trainees who visit other developing countries.

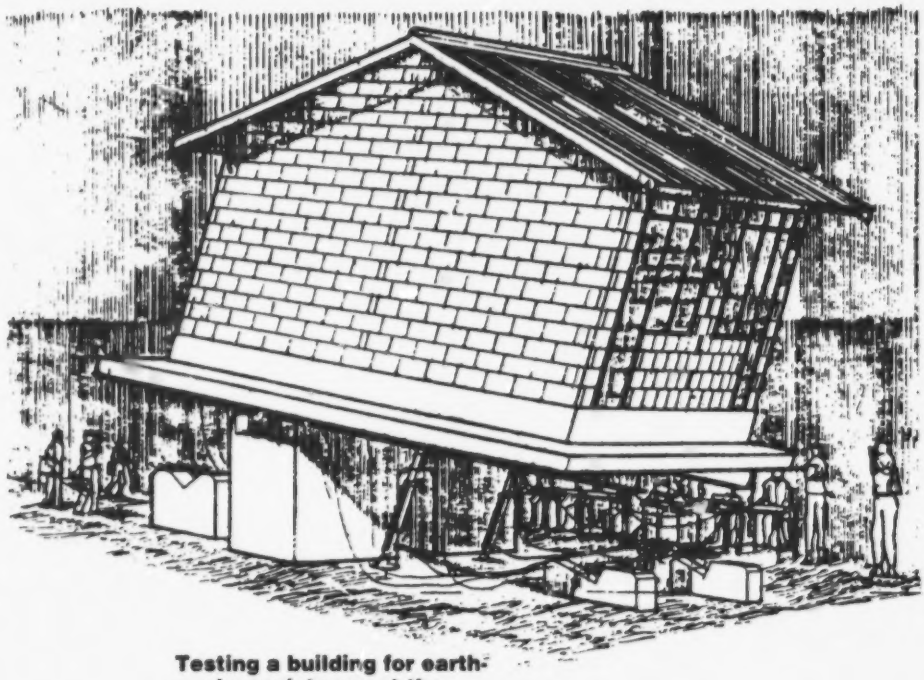
"No matter how large or small the project, the effect of our TCDC exchanges is to advance the economic development of our individual nations and add to our collective strength," says Minister Moerdiono. State Secretary of Indonesia. "Despite economic adversity from time to time, we have managed to allocate significant resources from our national budget to TCDC programmes."

The Indonesian Government has spent US$ 4 million for TCDC projects over the past ten years. In most cases, Indonesia bears the cost of board, lodging, local transportation and pocket money of the participants coming to Indonesia on TCDC programmes. In some instances, Indonesia makes alternative arrangements with the participating country or obtains catalytic funding from an agency or donor country. Financing is decided on a case-by-case basis.

In addition, the United Nations Development Programme (UNDP) has contributed close to $2 million since 1980 for the support of TCDC activities in Indonesia. These funds, drawn from the country's Indicative Planning Figure (IPF) allocation, have been used largely to cover international travel costs of participants.

All information concerning Indonesia's TCDC capacities and needs is printed in an annual "yellow book" which is distributed to other developing countries through Indonesian embassies and UNDP field offices. This publication contains three sections: fellowship awards, TCDC programmes funded by Indonesia in co-operation with UNDP, and training courses which require funding from outside do-

Analysing soil samples at the Construction Guidance Service Centre in Bekasi.



Testing a building for earthquake resistance at the Institute of Human Settlements, Bandung, west Java.

Other countries are learning from Indonesia's success in family planning.

nors or the requesting government itself. In all cases, TCDC seminars, courses and workshops are conducted in English.

"While we have a great deal to offer, agricultural training is one of our strongest areas of expertise," says Adik Bantarso, head of the TCDC Programme Division of Indonesia's Bureau for Technical Co-operation. "We used to be a major importer of rice. By 1984 we had turned things around and achieved self-sufficiency in rice production."

That accomplishment provided a springboard for numerous TCDC exchanges in the area of food crop production. A one-month rice development course, for example, is offered through Indonesia's Agency for Agricultural Education, Training and Extension. It teaches foreign agricultural experts everything from preparing land for improved rice varieties to managing farm co-operatives. Each year, more than ten field workers from as far as Suriname, Ethiopia and Tanzania come to Indonesia to learn improved rice production techniques.

At the Construction Guidance Service Centre in Bekasi, 20 kilometres southeast of Jakarta, miniature models of irrigation dams and canals are used to study the movement of water through farmland. Forty-four irrigation engineers from Madagascar, Tanzania and 12 Asian countries have learned how to construct and maintain effective irrigation channels. The intention is to improve

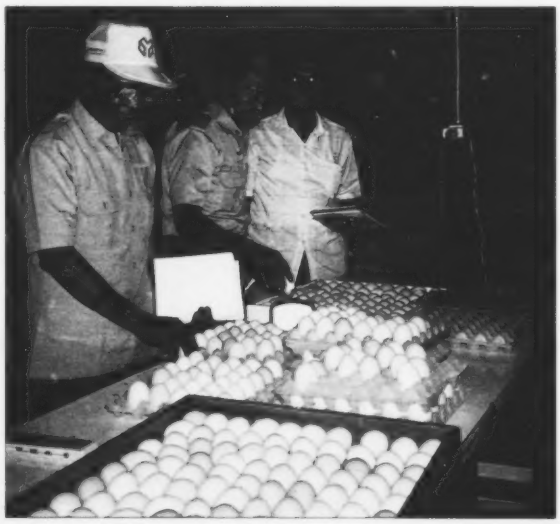
the quality of water and prevent erosion in the canals, with the ultimate aim of increasing food production.

Poultry production is considered one of the most effective ways of providing high quality protein to people in developing countries. To increase production of this valuable nutritional resource, Indonesia created an international course on poultry husbandry. The curriculum has attracted 80 candidates from 15 developing countries since 1987. Located at the International Training Centre for Poultry Husbandry and Feed Manufacturing in Bogor, the course offers students a chance to learn by doing.

Hybrid chickens, kampung chickens, ducks and Japanese quail are hatched, fed and slaughtered in a 9,000-egg capacity hatchery and a simple slaughtering room. The sounds and smells surrounding the Institute's poultry houses and feed mill, located on the 10 hectare rural campus one hour outside of Jakarta, could easily be mistaken for those of a commercial poultry farm.

The international course on poultry husbandry currently receives support from the Dutch Government which pays the airfares and $2,000 course fee for the candidates. This support ends next year, however, and the Institute is negotiating with the Indonesian Government to provide assistance through its TCDC programme.

"Our course is tailor-made for the needs of developing countries," says Mrs. Budiharti, Director of the International Training Centre for Poultry Husbandry. "We use technology which students can apply back home. I am optimistic that our facilities will continue to be tapped by other countries in Asia, and that eventually we shall have African students as well."



The International Training Centre for Poultry Husbandry at Bogor has attracted many trainees from developing countries.

The country's experience with pooling and sharing technologies, resources and expertise is expanding into a new area for which Indonesia has won international acclaim. "Family planning is a national success story," says Sridadi Suparto, Chief of the Education and Training Centre for the National Family Planning Coordinating Board (BKKBN). "Despite the fact we are the fifth most populated country in the world, with vast cultural and religious diversity, we are close to reducing our fertility rate to half what it was in 1965. Other developing countries are coming to us for guidance in shaping family planning programmes."

Since 1986, 75 policy makers, programme managers and family planning practitioners from Asia, Africa and the Middle East have come to learn about BKKBN's innovative family planning efforts. Its effective strategy is based on a firm and active commitment of government and religious leaders at the national and local level. Decentralization is the key to BKKBN's success. Contraceptives are distributed through a community-based programme using village volunteers. Wherever possible, health and family welfare programmes are integrated with other development activities. Through field visits to local communities, TCDC participants have learned first-hand how to plan and manage successful grass roots family planning activities.

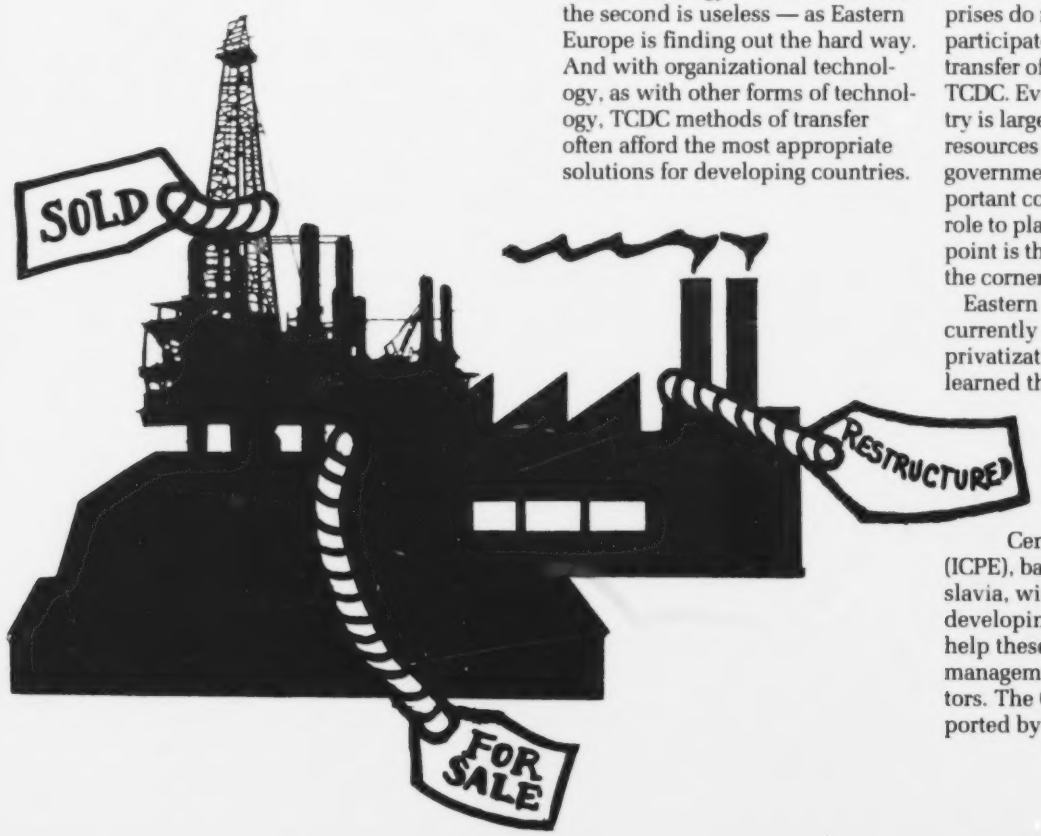
From reducing fertility rates to increasing crop production, the Government in Jakarta has attained some remarkable development successes which it is ready and able to share with other countries. By fielding short-term experts, supporting consultancies, and promoting study tours and specialized training, Indonesia is playing a major part in helping the south move closer to collective self-reliance. ■

TCDC and the Private Sector: An East European View

The current world-wide swing to the private sector is affecting the pattern of Technical Co-operation among Developing Countries. Here, Ales Vahcic, Professor of Economics and Management at the University of Ljubljana, Yugoslavia, examines this development

Ljubljana, Yugoslavia — Up to now, Technical Co-operation among Developing Countries (TCDC), as conceived in the Buenos Aires Declaration of 1978, has been built largely on contacts between governments and public sector bodies, with only peripheral involvement of the private sector. This is partly a heritage from the era when the guiding of economic development was perceived as basically a public sector concern, for which the responsibility rested primarily with governments.

Now, with the much-publicized swing to the private sector throughout the world, TCDC is being affected in a number of ways. In the first place, TCDC training and assistance programmes are focusing increasingly on such issues as privatization and economic restructuring. One of the lessons that we are learning from privatization is that "organizational technology" — the development of entrepreneurship and managerial capacities — is just as important as nuts-and-bolts technology. Without the first, the second is useless — as Eastern Europe is finding out the hard way. And with organizational technology, as with other forms of technology, TCDC methods of transfer often afford the most appropriate solutions for developing countries.



Secondly, organizations that exist to promote south-south co-operation, such as the Special Unit for TCDC of the United Nations Development Programme (UNDP), are giving increasing priority to efforts related to private sector development. With approximately 25 per cent of listings in the INRES-South data base being private institutions, the Special Unit is well placed to give practical support to such efforts.

Thirdly, the private sector is beginning to play a larger role in operational TCDC. The extent of this role, however, varies from country to country and sector to sector.

In the case of small and medium-sized private enterprises, government support will continue to be vital for TCDC, as most such enterprises do not have the resources to participate in an international transfer of technology through TCDC. Even where a private industry is large enough to possess the resources to engage in TCDC, the government will still have an important co-ordinating and catalytic role to play. The government focal point is therefore likely to remain the cornerstone of TCDC.

Eastern Europe as a whole is currently acting as a laboratory of privatization, and the lessons learned there will be very valuable for developing countries. One institution that is well placed to pass on such lessons is the International Center for Public Enterprises (ICPE), based at Ljubljana in Yugoslavia, with a membership of 39 developing nations. Its aim is to help these countries to upgrade the management of their public sectors. The Center, which is supported by UNDP, provides advi-

sory services, conducts training programmes, undertakes research, organizes conferences and runs an information and documentation service. Recently it inaugurated a one-year Master of Business Administration programme in public sector management.

Now ICPE is having to respond to the privatization trend. The Center believes that this trend has made its work more rather than less relevant. It can help state enterprises become viable enough to be sold and can provide advice on whether privatization is desirable and, if so, what degree and form of privatization is appropriate. This kind of advice is often more relevant to the needs of developing countries than the straight "sell-off" approach that is favoured in many industrialized countries.

It is likely, however, that the public sector in most developing countries will remain considerably larger than the private sector, despite privatization. Hence ICPE will continue to serve the public sector, while evolving to adapt to the era of privatization.

Apart from the changes already mentioned, privatization and the world-wide move towards a market-responsive mentality have also inevitably affected the general climate for TCDC. In a market-oriented world there is less readiness to exchange technologies out of purely philanthropic motives. Increasingly, it is the balance sheet that is the important factor. Already this is apparent in the way in which Eastern European countries have become more commercial in their approach to the supply of technical assistance.

This does not in any way make TCDC redundant. On the contrary, there is all the more need for developing countries to help each other, either through bilateral exchanges or through multi-national organizations. Although the transfer of technical systems may increasingly be a commercial matter, the transfer of experience, knowledge and organizational skills can still be carried out on a traditional TCDC basis. TCDC therefore has a significant role to play in helping the developing world to prosper in the era of privatization. ■

Students from developing countries learn to use computerized management support systems at ICPE.

The library of ICPE carries a wide range of business and management publications.

Turning Rivers Into Energy

Sid Kane writes about China's hydropower training programme, which it is sharing with other developing countries

Hangzhou, China — During the oil crisis in the 1970s many governments began looking again at alternative energy sources. Even after oil prices leveled off and markets stabilized, an international conference in Kathmandu in 1979, sponsored by the UN Industrial Development Organization (UNIDO), urged developing countries to lower their reliance on foreign oil, and to speed development of hydropower.

One of many small hydropower plants in eastern China.

As recent events in the Middle East bear out, that recommendation has stood the test of time. Self-reliance in energy production has once again emerged as an important development objective.

In China, the Hangzhou Regional Training Centre for Small Hydropower (HRC), established with the support of the United Nations Development Programme (UNDP) and UNIDO, is helping governments in the Asia and Pacific region to pursue this goal.

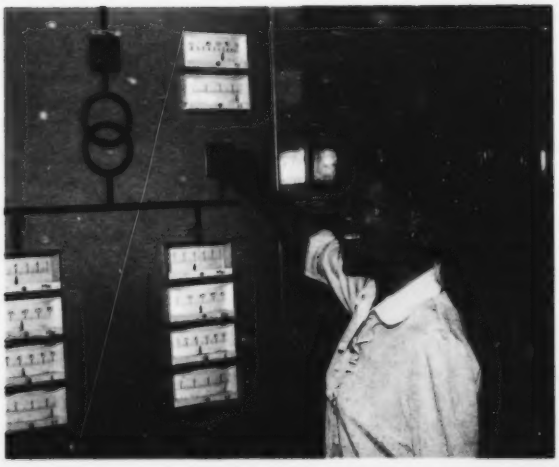
"Many countries in the region, including Malaysia, the Philippines and Thailand, want to get away from imported diesel and tap their rivers for energy," says Zhu Xiaozhang, the Centre's Director. "Hydropower has become a topic of great interest among developing countries because of the limitations of conventional sources of energy, which are expensive and can cause environmental damage."

Created in 1981, the Centre aims to promote international co-operation in small hydropower development by sending out consultants and providing training for visiting experts. As part of China's National Research Institute for Rural Electrification, it also conducts research and training for China's own needs. The Centre's programme of Technical Co-operation among Developing Countries (TCDC), funded by UNDP and the Chinese government, gives free seminars and pays for travel and living expenses of visiting participants. Since 1983, 17 training workshops have been held here, to the benefit of more than 200 experts from 24 countries. Most have come from Asia and the Pacific, but others have journeyed from as far away as Latin America and the Middle East.

The Centre is recognized as being one of the foremost of its kind in the developing world. Its workshops, which last from ten days to a month, provide instruction in rural electrification, civil engineering, hydrology, hydraulics and site selection. They also include field visits to small hydropower installations in the open, hilly countryside near the Centre.

Small hydropower stations generally have a capacity of up to 25 megawatts and do not require the construction of massive dams that can profoundly alter an area's ecosystem. They are especially useful for rural areas that have many rivers and lie beyond the reach of the national electricity grid. For countries with widely dispersed rural communities, small-scale hydropower is therefore a sound and sensible way to supply energy while decentralizing its production.

China derives 20 per cent of its energy from large hydropwer stations and 10 per cent from small ones, which are found in nearly every part of the country where river energy can be harnessed. One third of the nation's counties — which number over 2,000 — are supplied by these smaller stations.



Top: **Zhu Xiaozhang, Director of the Hangzhou Regional Training Centre for Small Hydropower.**

Bottom: **A technician at a small hydropower plant near Hangzhou.**

China is therefore well placed to promote technical exchanges with other countries in small-scale hydropower.

"Many countries in the region, like Papua New Guinea and Vanuatu, have the natural resources but lack the technical expertise and capital to get going," Mr. Zhu says. "The knowledge we can provide, but the start-up capital remains a problem."

While they are less expensive to install than huge hydropower plants, the smaller stations still can cost upwards of US$20 million to construct. But once built they require little maintenance, and, unlike using imported oil, tapping into rivers does not call for spending scarce foreign exchange.

Mr. Zhu, who has visited six Asian and Pacific countries in recent years to provide advice and consultation services, believes firmly that small hydropower stations are the appropriate technology for developing countries that have the right natural resources. As well as having a minimal impact on the environment and low operations costs, the plants can take as little as a year to build. In addition, as Mr. Zhu enthusiastically points out, they can be constructed with local materials and often with community participation.

The next country that stands to benefit from the Centre and from Mr. Zhu's direct involvement is Fiji. It has sent experts for training here in the past, and recently invited Mr. Zhu to help set up two new stations. The island-country already gets much of its energy from one large hydropower station, and these new facilities will help increase its supply and sources. "Fiji also wants to move away from foreign oil and rely more on its indigenous resources, and they have asked for our assistance," Mr. Zhu says. ■

Latin America Draws Closer Together

The Latin American Economic System recently held its 16th annual council in Caracas, Venezuela. Christopher McIntosh reports on the meeting and on its significance for the strengthening of Technical Co-operation among Developing Countries in Latin America and the Caribbean

Caracas, Venezuela — A remarkable breed of cattle developed in Venezuela, with an astonishingly high milk-producing capacity, was one of the subjects discussed by TCDC focal points from 26 countries of Latin America and the Caribbean, who met here from 3 to 6 September. Other topics included health, aquaculture, environment and information systems. The event was part of the annual meeting of the Latin American Economic System (SELA), founded in 1975 to encourage countries of the region to co-operate in promoting development.

The meeting, held at SELA headquarters in downtown Caracas, was literally a two-tier event. On one floor ministers and senior officials discussed wide-ranging policy matters, while on the floor below the focal points hammered out specific TCDC proposals and discussed projects for bilateral co-operation.

Countries represented at the TCDC focal points meeting were: Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela.

Also represented were the World Health Organization, the Food and Agriculture Organization of the United Nations, the International Organization for Migrants, the Action Committee for Supporting Economic and Social Development in Central America, the Caribbean Community and the Economic Commission for Latin America and the Caribbean.

The United Nations Development Programme (UNDP) was represented by Surinder M.S.Chadha, Director of the Special Unit fo. TCDC, and Graciela

A herd of Carora cattle, a high milk-yielding breed that Venezuela plans to make available to other developing countries.

Vazquez-Diaz, the Special Unit's Senior Regional Officer for Latin America and the Caribbean. The Special Unit's catalytic support for the meeting included providing air fares and living allowances for the TCDC national focal point from each country.

The predominant theme of both gatherings was the need for the countries of Latin America and the Caribbean to forge closer economic links. Addressing the ministerial meeting on 6 September, the President of Venezuela, Carlos Andrés Perez, urged that the region should emulate the trend to integration exemplified by the European Community. Over the past ten years, he pointed out, the region had suffered a marked economic decline. "Our task in the 1990s," he said "must focus on the recovery and development of our economies and the overcoming of our social problems."

This theme was also emphasized by SELA's Deputy Permanent Secretary, Henry Gill of Trinidad and Tobago, in his opening address to the TCDC meeting on 3 September. Mr. Gill stressed the growing importance of TCDC for the region.

Delegates spent most of the first two days on the follow-up to various existing TCDC proposals for Latin America and the Caribbean. These include a scheme to set up a TCDC programme on aquaculture for the region, which had emerged at the TCDC programming exercise held in Mexico City, in June 1989, with the support of UNDP, SELA and the Inter-American Development Bank (IDB).

On that occasion, 110 TCDC projects and exchanges were negotiated by 20 countries. Some of these have already been implemented. Brazil, for example, has sent specialists to Guyana, and Panama has supplied species to Costa Rica. Further implementation of the scheme, however, depends on additional funding, which is being sought from the IDB, UNDP and the participant countries.

Carlos Andrés Perez, President of Venezuela (left), addressing participants at the 16th annual meeting of the Latin American Economic System, in Caracas.

Also discussed was a project for co-operation in technology for primary health care, which would include training, exchange of products, the setting up of a technological information network and the harmonization of medical regulations. As a step in this direction, the delegates approved a programming exercise in the area of health, to be held in Chile in March, 1991.

It was also decided to hold a programming exercise in trade and agro-industry. The time and place are yet to be determined.

The meeting also endorsed a project to strengthen the managerial capacity of national focal points in the region. This will include training personnel, establishing data bases and providing better information about possible sources of funding for TCDC. UNDP has been asked to contribute US$381,000 to the one-year project, which is planned to begin in early 1991. It was decided that SELA should be the implementing agency.

On the second afternoon, delegates were given presentations of three information systems. The first was INFOSELA, a system that SELA is currently setting up to provide data on countries' capacities and needs, national focal points and technical institutions. In the second presentation, José Kutos Flisar of SELA demonstrated PESICRE, an information system dealing with regional co-operation. Finally, Edward C. White, Principal Information Officer of the Special Unit for TCDC, who was a

specially invited guest, presented the unit's Information Referral Service (INRES-South), a global data base which currently lists over 4,000 developing country institutions that can provide training and expertise.

The third day of the meeting included a talk by Eduardo Praselj, Chairman of the Perez-Guerrero Trust Fund. He began by reporting on the meeting of the Group of Experts on TCDC, convened by UNDP at the United Nations in New York in April 1990. Mr. Praselj then went on to describe the workings of the Perez-Guerrero Trust Fund, which was established in 1983 by the Group of 77 to further technical and economic cooperation among member countries of the Group. As Mr. Praselj explained, the fund is intended for two purposes: first, to support feasibility and pre-investment studies carried out by institutions in developing countries; and second, to provide seed money to assist the implementation of projects.

Pedro Morales Carballo of the Cuban State Committee for Economic Collaboration, who chaired the meeting of TCDC focal points.

The next talk, given by Gerardo Santeliz Carrasco of the Venezuelan Association of Carora Cattle Breeders, aroused intense interest among the delegates. The Carora is a type of cattle that has been developed over the past 60 years in north-western Venezuela. The cattle were evolved by careful crossing of selected European breeds with native cattle from Jamaica, Cuba, India and other countries. This was the first briefing on the breed to an international gathering.

The significance of the breed to the developing world is twofold. First, the Carora are uniquely well adapted to living in tropical climates. Second, they have an unusually high milk yield: an annual average of 3,052 litres per cow, as against the national average in Venezuela of 1,318 litres. The breed therefore has the potential to increase dramatically the supply of protein in developing countries.

"A miracle" is how Mr. Santeliz described the breed. "With Carora cattle," he said, "we could bring per capita milk consumption almost up to the level of the United States."

He hopes that the breed will be made available as soon as possible to all the countries that need it. First, however, it will be necessary to set up a development centre where research into the strain can continue and to which people can come from all over the world to obtain the cattle. For this purpose, $140,000 is being requested from the Perez-Guerrero Trust Fund.

During the meeting, delegates were busy in bilateral negotiations, many conducted outside the formal sessions. Most countries had both capacities to offer and needs to be met.

Panama, which is preparing for a TCDC programming exercise next year, came with a catalogue of capacities and needs which was circulated among the delegates. The Panamanian representative, Georgina Osorio, is eager to see her country expand its TCDC activities. "Being a free trade zone," she explained, "Panama has great experience in trade and banking, which could benefit other countries of the region."

The Colombian representative, Yolanda Ramirez Prado, discussed with the Venezuelan delegation a proposal to help improve the standard of living of Indians living in the border area between the two countries. With Peru she discussed a proposal for the Peruvians to help Colombia upgrade its sea fishing industry.

For Chile this was a particularly significant meeting. Following its recent return to democratic government, the country is eager to collaborate with its neighbours and has recently established a new unit, the Agency for International Cooperation, within the Ministry of Planning. Venezuela was one of the countries with which the Chilean delegation discussed future collaboration, covering a wide variety of areas including aqua-culture, environment, mining and sanitation.

The chairman of the meeting, Pedro Morales Carballo of the Cuban State Committee for Economic Collaboration, felt positive about what had been achieved. "We are moving ahead step by step," he said, "and every year more and more people come to this event." ■

Pakistan: National Training for TCDC

Andrew Boner reports on the recent national workshop in Islamabad on methods of applying the concept of Technical Co-operation among Developing Countries

Top: **Participants at the workshop included representatives of government departments, public corporations and United Nations agencies.**

Bottom: **S. Shahid Husain, Deputy Director of the Special Unit for TCDC *(left)* shakes hands with UNDP Deputy Resident Representative Cornelis Klein at the close of the session.**

Islamabad, Pakistan — The successful use of TCDC methods depends on strong, self-reliant capacities for planning and implementation of projects. Building such capacities demands careful training. The advantages of such training were recently demonstrated here during a three-day workshop on TCDC methods, held from 16 to 18 July and organized by the Government of Pakistan in collaboration with the Special Unit for TCDC of the United Nations Development Programme (UNDP) and the office of the UNDP Resident Representative in Islamabad.

Pakistan has been enthusiastically applying the concept of TCDC for more than a decade through bilateral co-operation with other developing countries. A unit in the Economic Affairs Division of the Ministry of Finance is charged with co-ordinating both outgoing and incoming assistance. Through its links with industrial, educational and other professional institutions in various sectors, the unit is able to provide training and expertise in a wide variety of fields. In September 1988 Pakistan hosted a sectoral TCDC programming exercise on industry and science, at which 148 projects were agreed upon.

TCDC is therefore not new to the country. The purpose of the workshop, however, was to impart a greater understanding of how to use TCDC methods in programmes and projects, especially those supported by the UNDP and other United Nations agencies. The audience of over 40 people consisted of senior federal and provincial government administrators, representatives of public corporations and officials from various United Nations agencies.

UNDP's resource persons at the workshop included Cornelis Klein, Acting Resident Representative; S. Shahid Husain, Deputy Director of the Special Unit for TCDC; Ed-

ward C. White, Principal Information Officer for the Information Referral Service (INRES-South); Aye Than Doliner, Senior Regional Officer for Asia and the Pacific in the Special Unit for TCDC; and Samuel Oglesby, the Special Unit's Senior Training and Evaluation Officer.

At the inaugural session, Mr. Klein gave a welcoming speech by reflecting on Pakistan's current and past experiences with TCDC. The meeting was then addressed by Mr. Husain, who outlined the four pillars on which successful TCDC rests: first, a determination by governments at a high level to employ TCDC methods for development; second, a strong national TCDC focal point with linkages to all relevant ministries and institutions; third, an effective TCDC information system with connections to similar systems in other developing countries; fourth, adequate financial resources.

The Government of Pakistan was represented by Mirza Hamid, Joint Secretary of the Economic Affairs Division in the Ministry of Finance, who spoke in the opening session. Mr. Hamid emphasized the value of TCDC to Pakistan at a time when the country is engaged in a massive development effort. He spoke of how TCDC could enable developing countries to share appropriate and cost-effective technology.

In the first working session, Mr. Oglesby led the discussion on the role of TCDC in promoting economic self-reliance. This session reviewed the basic concepts of TCDC and how they relate to other forms of technical co-operation.

On the same day, Edward White gave a presentation on INRES-South, including a demonstration of how the system could be used to search for an institution to supply expertise in a given category. Pakistan is the country with the third largest representation in the INRES data base, with 227 institutions listed.

The second day was taken up with a more detailed exposition, led by Aye Than Doliner and subsequently by Edward White, of how TCDC is applied in practice. Points covered included the legislative and institutional prerequisites for successful TCDC, arguments for TCDC methods versus traditional UN development system assistance, and how to design a project using TCDC. The day's proceedings also included a detailed case study based on a specific project proposal being developed in Pakistan in the area of fish-farming.

On the final day, under the chairmanship of M.A.Choudhary, Director General of Pakistan's Management Services Division, discussions were led by the participants themselves. In the final stages of the workshop, the participants drew up a list of recommendations. Now convinced of the viability and cost-effectiveness of TCDC methods, they urged that the government consider using TCDC modalities wherever possible in future national execution of projects. They also recommended that the national TCDC focal point should be strengthened and should acquire facilities for using the INRES-South system as soon as possible.

This was the second such workshop to be held since the Special Unit expanded its training activities last year. Local costs of the workshop were covered under Pakistan's TCDC umbrella project, funded by UNDP from the country's Indicative Planning Figure (IPF) resources. The cost of attendance by the resource persons from UNDP headquarters was financed by the Special Programme Resources (SPR) allocation for TCDC.

Other workshops are scheduled around the world in the coming months, and one is planned to bring together as many as a dozen small island developing countries in an effort to address training needs on a regional or sub-regional basis. ■

World Development
INRES-SOUTH INFORMATION REQUEST
WHAT IS INRES-South? INRES-South is a computerized information referral service. It responds to requests for matching specific needs with the capacities of institutions in developing countries to provide training and expertise. When we provide information on institutions relevant to your request, the next step will be to contact
HOW TO REQUEST INFORMATION FROM INRES-South: You can request information from INRES-South by sending back a completed INRES-South Request Form.
United Nations Development Program
Division of Information
New York, N.Y. 10017
United States of America
The Editor,
Co-operation South,
UNDP Division of Information,
U.N. Plaza, New York,
United States of America.

United Nations
Development Programme

World Development

3 December 1990

Dear Reader,

I am writing to thank all of you who participated in our readership survey and to let you know about some of the survey's findings. The survey, included with a revalidation form for the mailing list, covered four UNDP publications, and we received a total of 7,469 useable responses.

Co-operation South received strong support from its readers. Of the 4,943 readers who rated the magazine, 1,442 or 29% called it an "excellent" publication. Forty-six per cent rated it "very good," 22% found it "good." Just under three per cent, or 140 individuals rated it "fair," and only 11 people rated it "poor."

We also asked how many other people shared the primary reader's copy of a UNDP publication. Among all respondents specifying a number or range of numbers, the average "passalong" per magazine was 15 other readers. Spanish language editions got the widest distribution with 22 additional readers per copy.

We also asked what our publications were used for. Answers: for background information related to their work (34%), reference and library use (24%), teaching (15%), personal enlightenment (13%), writing books and articles (7%).

The survey also solicited ideas for improving our publications. The suggestions were summarized in a report made by two interns, Tatjana van Beek (FRG) and Eric Stein (USA), who tabulated and analyzed the questionnaires. We have studied this report and, where possible, will take reader suggestions into account.

Sincerely,

Christopher McIntosh

Christopher McIntosh
Editor

One United Nations Plaza • New York, NY 10017 • Telephone (212) 906 5000 • Cable: UNDEVPRO NEW YORK

Courtesy of Co-operation South, UNDP, the magazine of Technical Co-operation among Developing Countries (TCDC)